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Phosphorylation of ATM/ATR substrates in eukaryotic cells after infection with Helicobacter pylori

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Abstract

Infection with Helicobacter pylori has been associated with the development of gastric adenocarcinoma in humans, but influence on genetic material of the host cell is still unknown. Here we characterize phosphorylation of ATM-kinase substrates in HeLa and AGS cells in response of Helicobacter pylori attack. Infection with wild-type (cag PAI-positive) and corresponding isogenic cag PAI negative mutant induces activation of Chk1 and Chk2 kinases. Only Chk1 is activated directly by ATM-kinase. We identified group of proteins which are activated by the Helicobacter pylori in AGS cells, using MALDI analyze and two-dimentional gel electrophoresis.

Keywords

ATM/ATP kinases, Helicobacter pylori, Phosphorylation, RPA32A, Splicing-factor